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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,838	02/23/2004	Isao Yokokawa	118749	5427

25944 7590 10/13/2005

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EXAMINER

LUU, CHUONG A

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/782,838

Applicant(s)

YOKOKAWA ET AL.

Examiner

Chuong A. Luu

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 03, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

PRIOR ART REJECTIONS

Statutory Basis

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The Rejections

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Yokokawa et al. (U.S. 6,284,629 B1).

Yokokawa discloses a method of fabricating an SOI wafer with

(1) a method of producing an SOI wafer in which an SOI layer is formed on a buried oxide film by, at least implanting at least one kind of ion of hydrogen ion and a rare gas ion into the surface portion of a bond wafer to form an ion-implanted layer, bonding the bond wafer and a base wafer to each other through an oxide film, and

delaminating the resultant bonded wafer at the ion-implanted layer, wherein assuming that X (nm) represents the thickness of the buried oxide film and Y (nm) represents the thickness of the SOI layer in the SOI wafer immediately after delaminating at the ion-implanted layer, when forming the ion-implanted layer, when the thickness X of the buried oxide film is $X \leq 100$, in forming the ion-implanted layer, the ion implantation is carried out with the ion implantation conditions being set such that the sum $X + Y$ of the thickness of the buried oxide film and the thickness of the SOI layer satisfies $X + Y > 1500 - 14X$, after which the bonding process and the delaminating process are carried out and, thereafter, a thinning treatment of the SOI layer carried out to make the SOI layer into a thin film having a predetermined thickness (see column 5, lines 56-67 and column 6, lines 1-58. Figure 1);

(2) wherein in forming the ion-implanted layer, the ion implantation is carried out with the ion implantation conditions being set such that the sum $X+Y$ of the thickness of the buried oxide film and the thickness of the SOI layer becomes 390 nm or more when the thickness X of the buried oxide film is made into $80 \leq X \leq 100$, such that $X+Y$ becomes 810 nm or more when X is made into $50 \leq X < 80$, and such that $X + Y$ becomes 1090 nm or more when X is made into $30 \leq X < 50$ (see column 5, lines 56-67 and column 6, lines 1-58. Figure 1);

(3) wherein the thinning treatment of the SOI layer is carried out by a sacrificial oxidation treatment (see column 5, lines 27-55);

(4) wherein the thinning treatment of the SOI layer is carried out by a sacrificial oxidation treatment (see column 5, lines 39-47);

(5) an SOI wafer produced by the method of producing an SOI wafer (see Figure 1);

(6) an SOI wafer produced by the method of producing an SOI wafer (see Figure 1);

(7) an SOI wafer produced by the method of producing an SOI wafer (see Figure 1);

(8) an SOI wafer produced by the method of producing an SOI wafer (see Figure 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong A. Luu whose telephone number is (571) 272-1902. The examiner can normally be reached on M-F (6:15-2:45).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'C. Luu', with a stylized flourish at the end.

Chuong Anh Luu
Patent Examiner
October 06, 2005